

What is claimed:

1. A treatment liquid supply system comprising:

a treatment liquid tank that stores treatment liquid therein with the treatment liquid tank being air-tightly closed;

a nozzle connected to the treatment liquid tank through a treatment liquid supply pipe wherein the nozzle vacuum-sucks and injects the treatment liquid in the treatment liquid tank due to vacuum occurring in the nozzle caused by supplying pressurized air from outside of the nozzle thereto;

an air suction device branched in the vicinity of the nozzle from the treatment liquid supply pipe and connected to an upper side of the treatment liquid tank wherein the air suction device generates vacuum in the treatment liquid tank by sucking in air in an inner space thereof; and

a positive pressure supply device that supplies a positive pressure gas at a desired pressure to a vacuum space as formed in the inner space of the treatment liquid tank, wherein flow supply of the treatment liquid to the nozzle is controlled based upon a difference between the vacuum in the nozzle and pressure in the vacuum space adjusted by the positive pressure gas supplied to the treatment liquid tank by the positive pressure supply device.

2. A treatment liquid supply system according to claim 1, further comprising:

a pressure control device disposed between the positive pressure supply device and the treatment liquid tank to adjust the pressure of the positive pressure gas supplied to the treatment liquid tank.

3. A treatment liquid supply system according to claim 2, wherein the pressure control device comprises:

a mass flow controller that adjusts a flow amount of the positive pressure gas by measuring a mass of the flow amount thereof.

4. A treatment liquid supply system according to claim 1, wherein an atmosphere or an inert gas is supplied to the positive pressure supply device.

5. A treatment liquid supply system according to claim 1, wherein the nozzle in which the vacuum occurs caused by supplying the pressurized air thereto is used as a vacuum suction device to a pipe including the treatment liquid supply pipe connected to the nozzle.

6. A treatment liquid supply system according to claim 1, further comprising:
a wash liquid tank connected to the treatment liquid tank, wherein
a wash liquid is sucked from the wash liquid tank due to the vacuum occurring in the nozzle to wash the treatment liquid tank and the nozzle.

7. A treatment liquid supply system according to claim 1, further comprising:
a wash liquid tank connected to the nozzle, wherein
a wash liquid is sucked from the wash liquid tank due to the vacuum occurring in the nozzle to wash only the nozzle.

8. A treatment liquid supply system comprising:
a treatment liquid tank that stores treatment liquid therein with the treatment liquid tank being air-tightly closed;
a treatment liquid supply device that supplies treatment liquid to the treatment liquid tank;
a first treatment liquid supply pipe that connects the treatment liquid supply device to the treatment liquid tank to supply the treatment liquid thereto;
a first valve disposed in the first treatment liquid supply pipe to open and close connection between the treatment liquid supply device and the treatment liquid tank;
a nozzle that injects the treatment liquid supplied from the treatment liquid tank;
a second treatment liquid supply pipe that connects the treatment liquid tank to the nozzle to supply the treatment liquid to the nozzle;
a second valve disposed in the second treatment liquid pipe to open and close connection between the treatment liquid tank and the nozzle;
a pressurized-air-supply device connected to the nozzle wherein the nozzle vacuum-sucks and injects the treatment liquid in the treatment liquid tank due to vacuum occurring in the nozzle caused by supplying pressurized air from the pressurized-air-supply device to the nozzle;
an air suction device an end of which is connected in the vicinity of the

nozzle to the second treatment liquid supply pipe and another end of which is connected to an upper side of the treatment liquid tank wherein the air suction device supplies the vacuum occurring in the nozzle to an inner space in the treatment liquid tank;

a third valve disposed in the air suction device to open and close connection between the upper side of the treatment liquid tank and the nozzle;

a positive pressure supply device that supplies a positive pressure gas at a desired pressure to a vacuum space as formed in the inner space of the treatment liquid tank;

a pressure control device disposed between the positive pressure supply device and the treatment liquid tank to adjust pressure of the positive pressure gas supplied to the treatment liquid tank; and

a fourth valve disposed between the treatment liquid tank and the pressure control device to open and close connection therebetween, wherein

the treatment liquid tank, the nozzle, the pipes and the valves are integrally formed as a single member.